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EXAMINER

RAMAKRISHNAIAH, MELUR

ART UNIT PAPER NUMBER

2643

DATE MAILED: 03/24/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/954,619

Applicant(s)

KOJOLA ET AL.

Examiner

Melur Ramakrishnaiah

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 19-23, 26, 28-33 and 35-40 is/are rejected.
- 7) ☒ Claim(s) 15-18, 24, 25, 27 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8, 10-11, 14, 19, 21-22, 23, 26, 28-33, and 35-40, are rejected under 35 U.S.C. 102(b) as being anticipated by Lathi (US PAT: 6,028,567).

Regarding claims 1 and 23, Lathi discloses a housing (fig. 4a), an internal broadcast reception system (fig. 6), disposed within the housing, wherein the reception system comprises: an electrically non-conductive substrate (21, fig. 2) located inside the device body, an electrically conductive element (22, fig. 2), disposed on the substrate, for receiving the broadcast signals (col. 2 lines 34-41, lines 14-16), a signal processing module (304, 305, fig. 6) disposed on the substrate adjacent and electronically connected to one end of the electrically conductive element, responsive to received signals, for providing pre-processed signals, and means (314, fig. 6), responsive to pre-processed signals, for providing audio signals indicative of the broadcast signals (col. 4 lines 52-67, col. 5 lines 1-18).

Regarding claims 2-5, 8, 10-11, 14, 19, 21-22, 26, 28-33, and 35-40, Lathi further teaches the following: wherein a hand-held telecommunication device includes a chassis within the device body (for example fig. 4) for disposing telecommunication components, and wherein an electrically non-conductive substrate is part of a chassis (col. 2 lines 34-41, lines 14-16), an electrically non-conductive substrate (21, fig. 4) is made of a rigid material (col. 2 lines 34-35), an electrically non-conductive substrate is made of flexible material (col. 4 lines 43-46), an electrically conductive element has a meandering shape (22, fig. 2) for reducing the size of the electrically non-conductive substrate, an electrically conductive element is disposed on one side of the electrically non-conductive substrate (fig. 2), an electrically conductive element is wound around the electrically non-conductive substrate (fig. 2), an electrically non-conductive substrate is made into a compact shape to be fitted in the device body (figs. 2, 6, col. 5 lines 14-18), broadcast signals are frequency modulated signals (implied by use of a communication device in GSM, col. 3 lines 4-6), a signal processing module comprises an active circuit, responsive to the received signals, for providing amplified signals (col. 4 lines 63-66), a signal processing module

comprises a band-tuning circuit, responsive to the received signals, for selecting a broadcasting frequency band for providing band-tuned signals (col. 4 lines 31-20), signal processing module comprises an amplification device (313, fig. 6), responsive the band-tuned signals, for providing amplified signals (col. 5 lines 8-11), broadcast signals are digital broadcast signals (implied by GSM system, col. 16-20), providing means comprises a converter (303, fig. 6), responsive to the pre-processed signals, for providing signals in a digital form, wherein audio signals are provided based on the signals in the digital form (col. 4 lines 66-67, col. 5 lines 1-6), means (305, fig. 6) for controlling the signal processing module (304/311, fig. 6) for selecting a broadcasting frequency band, wherein pre-processed signals are indicative of the broadcast signals of the selected frequency band, for selecting a broadcast channel in the broadcasting frequency band, means (305, fig. 6) for selecting a broadcast channel in a broadcast frequency band, means (304, fig. 6) comprises a tuning circuit (not shown) for selecting a broadcast channel in a broadcast frequency band for providing further signals indicative of the broadcast of the selected channel (this is implied by mobile device locking to the strongest broadcast signal from a base station as is well known in the art), non-conductive substrate (21, fig. 2) is made of rigid material mechanically linked to the chassis and integrated broadcast reception system is electronically linked to the chassis (figs. 2, 6, col. 5 lines 14-18).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lathi in view of Cassel (WO 98/49742).

Regarding claims 6-7, Lathi does not teach the following: physical length of the electrically conductive/non-conductive element is substantially smaller than the quarter-wave length of the received signals.

However, Cassel discloses an antenna for a radio communication apparatus which teaches the following: physical length of the electrically conductive/non-conductive element is substantially smaller than the quarter-wave length of the received signals (fig. 2, page 3 lines 36, page 4 lines 1-3).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Lathi's system to provide for the following: physical length of the electrically conductive/non-conductive element is substantially smaller than the quarter-wave length of the received signals as this arrangement would facilitate would facilitate to obtain the system to meet required requirements for the applications as taught by Cassel.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lathi in view of Kataki et al. (JP359169207A, hereinafter Kataki)

Regarding claim 9, Lathi does not teach the following: electrically conductive element is disposed on both sides of the electrically non-conductive substrate.

However, Kataki discloses antenna feeding circuit which teaches the following: electrically conductive element is disposed on both sides of the electrically non-conductive substrate (see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Lathi's system to provide for the following: electrically conductive element is disposed on both sides of the electrically non-conductive substrate as this arrangement would facilitate to increase space for line wiring and to improve freedom for wiring as taught by Kataki.

6. Claims 12-13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lathi in view of Auriol (US PAT: 5,135,422).

Regarding claims 12-13, Lathi does not teach the following: electrically conductive element is a wound coil and has a helical shape.

However, Auriol discloses helical type antenna, which teaches the following: electrically conductive element is a wound coil and has a helical shape (fig. 2, col. 3 lines 41-55).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Lathi's system to provide for the following: electrically conductive element is a wound coil and has a helical shape as this arrangement would provide another means for processing the broadcast signals as taught by Auriol.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lathi in view of Matsumoto (JP408046669A).

Regarding claim 20, Lathi does not teach the following: active circuit is controllable for adjusting gain of the amplified signals.

However, Matsumoto discloses mobile telephone set, which teaches the following: active circuit is controllable for adjusting gain of the amplified signals (see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Lathi's system to provide for the following: active circuit is controllable for adjusting gain of the amplified signals as this arrangement would facilitate to maintain the required sound volume in the communication system as taught by Matsumoto.

8. Claims 15-18, 24-25, 27, 34, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is

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(703) 305-1461. The examiner can normally be reached on M-F 6:30-4:00; every other F Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703)305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Melur Ramakrishnaiah  
Primary Examiner  
Art Unit 2643